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Reply to Office action of March 12, 2003

### REMARKS

Applicant cancelled claims 121-125, 203-206, 211, and 212; amended claims 126 and 214; and added new claims 215-257 to further define applicant's claimed invention. Support for new claims 215-218, 230-233, and 247-250 is found in the specification at least on page 19, lines 12-14 and 19-24. Support for new claims 219 and 220 are found in the specification at least in claims 124 and 125 as originally filed. Support for new claim 221 is found in the specification at least in claim 121 as originally filed and page 13, lines 13-15 and Figs. 12-15. Support for new claims 222-225 is found in the specification at least in claims 122-125, respectively, as originally filed. Support for new claim 226 is found at least in Figs. 12 and 15. Support for new claims 227 and 228 is found at least in Fig. 12. Support for new claim 229 is found at least in Fig. 13. Support for new claims 234 and 235 is found in the specification at least on page 5, line 22 to page 6, line 1. Support for new claims 236 and 252 is found at least in Figs. 16 and 19A, for example, projections 460 and 470. Support for new claims 237, 239-241, 253, and 255-257 is found at least in Figs. 16 and 19A. Support for new claims 238 and 254 is found at least in Figs. 17 and 18. Support for new claim 242 is found in the specification at least in claim 121 as originally filed and page 13, lines 13-15 and Figs. 12-15. Support for new claims 243-246 is found at least in claims 127-130 as originally filed. Support for the amendment to claim 126 is found at least in Figs. 16 and 19A, for example, projections 422, 460, and 470.

In the Office Action, the Examiner objected to claim 214 as being dependent upon a rejected base claim, but being allowable if rewritten into independent form to include all the limitations of the base claim and any intervening claims. Applicant

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rewrote claim 214 into independent form and included all the limitations of claims 126 and 213.

The Examiner rejected claims 121-125 and 203-212 under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention. In particular, the Examiner contends that the recitation "distance greater than one-half the maximum width" is not supported in the original disclosure. (Office Action, page 3, third paragraph). Applicant assumes that the Examiner meant to object to the phrase "distance no greater than one-half the maximum width" as this was the phrase recited in independent claim 121.

Applicant cancelled claims 121-125, 203-206, 211, and 212, but added new claim 226, which recites that the base of at least one of the surface projections is spaced apart from a base of another of the surface projections by "a distance no greater than one-half the maximum width." This recitation is supported in the original disclosure at least, for example, in Figs. 12 and 15.

The figures can provide support for the claimed invention to satisfy the written description requirement of 35 U.S.C. § 112, first paragraph. MPEP § 2163(II)(A)(3)(a) states that "[a]n applicant may show possession of an invention by disclosure of drawings or structural chemical formulas that are sufficiently detailed to show that applicant was in possession of the claimed invention as a whole. See, e.g., *Vas-Cath*, [citation omitted], ('drawings alone may provide a 'written description' of an invention as required by sec. 112"); *In re Wolfensperger*, [citation omitted], (the drawings of

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applicant's specification provided sufficient written descriptive support for the claim limitation at issue); *Autogiro Co. of America v. United States*, [citation omitted], ("In those instances where a visual representation can flesh out words, drawings may be used in the same manner with the same limitations as the specification.") (MPEP § 2163(II)(A)(3)(a), page 2100-161, cols. 1 and 2 (August 2001)). Applicant submits that the description, including the drawings, clearly allows a person of ordinary skill in the art to recognize that Applicant invented what is claimed in claim 226.

With respect to the rejection of claims 207-210 under 35 U.S.C. § 112, first paragraph, claims 207-210 depend from independent claim 126, or claims dependent therefrom. Applicant assumes that the inclusion of claims 207-210 in the rejection was a typographical error by the Examiner because the rejection did not state what subject matter of claims 207-210 was allegedly not supported.

The Examiner rejected claims 121, 124-126, 129, 130, and 203-210 under 35 U.S.C. 102(a) as being anticipated by WO Publication No. 98/58604 to Tsitsopoulos. Independent claim 126, as now amended, and new independent claim 242 recite a method for forming an implant including the step of forming surface projections, at least a first and second of the surface projections each having "a first facet configuration" and "a peak along a first line that is transverse to the mid-longitudinal axis of said implant;" at least a third and fourth of the surface projections each having "a second facet configuration" and "a peak along a second line that is transverse to the mid-longitudinal axis and off-set from the first line transverse to the mid-longitudinal axis," the first facet configuration being different from the second facet configuration.

Tsitsopoulos teaches an intervertebral disc 3a having a plurality of "dents" 4

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around the top of the disc. (Tsitsopoulos, page 3, lines 7-8; Fig. 4). Tsitsopoulos does not teach or suggest a plurality of surface projections, at least two of which have a facet configuration different from the facet configuration of at least two other surface projections as recited in independent claims 126 and 242.

The Examiner also rejected claims 122, 123, 127, 128, 211, and 213 under 35 U.S.C. § 103(a) as being unpatentable over Tsitsopoulos. Applicant submits that the rejection over claims 122, 123, 127, 128, 211, and 213 is rendered moot at least in view of the cancellation of claims 122, 123, and 211, and the patentability of independent claim 126, which Applicant submits is in condition for allowance and from which rejected dependent claims 127, 128, and 213 depend either directly or indirectly.

New independent claim 221 recites a method for forming an implant including the step of forming a plurality of surface projections on the upper and lower surfaces of the implant, at least two of the surface projections having a rearward facet with "an included angle between said rearward facet and the base greater than 90 degrees relative to at least one of said upper and lower surfaces of said implant."

The "dents" 4 of Tsitsopoulos have a rearward facet that is either at 90 degrees or less than 90 degrees relative to the surface of the disc. (See, e.g., Tsitsopoulos, Fig. 4). Tsitsopoulos does not teach or suggest an implant having at least two surface projections with a rearward facet having an included angle between the rearward facet and the base greater than 90 degrees relative to at least one of said upper and lower surfaces of the implant as recited in independent claim 221.

Accordingly, Applicant submits that independent claims 126, 221, and 242 are allowable over Tsitsopoulos and that dependent claims 127-130, 207-210, 213, 222-

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241, and 243-257 dependent from one of independent claims 126, 221, and 242, or claims dependent therefrom are allowable at least due to their dependency from an allowable independent claim.

In view of the foregoing remarks, it is respectfully submitted that the claims are patentable. Therefore, it is requested that the Examiner reconsider the outstanding rejections in view of the preceding comments. Issuance of a timely Notice of Allowance of the claims is earnestly solicited.


To the extent any extension of time under 37 C.F.R. § 1.136 is required to obtain entry of this reply, such extension is hereby respectfully requested. If there are any fees due under 37 C.F.R. §§ 1.16 or 1.17 which are not enclosed herewith, including any fees required for an extension of time under 37 C.F.R. § 1.136, please charge such fees to our Deposit Account No. 50-1066.

Respectfully submitted,

MARTIN & FERRARO, LLP

Dated: 9-12-03

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